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Predictability of clinical wear by laboratory wear methods for the evaluation of dental restorative materials

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Document Version

Publisher's PDF, also known as Version of record

Publication date:
2010

[Link to publication in University of Groningen/UMCG research database](#)

Citation for published version (APA):

Heintze, S. D. (2010). *Predictability of clinical wear by laboratory wear methods for the evaluation of dental restorative materials*. [Thesis fully internal (DIV), University of Groningen]. [s.n.].

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Predictability of Clinical Wear by Laboratory Wear Methods for the Evaluation of Dental Restorative Materials

Siegward Dietmar Heintze

The research presented in this thesis was conducted at:

The Research and Development facilities of Ivoclar Vivadent,
Schaan/Liechtenstein

Cover illustration:

Scanned casts of a mandibular molar with a two-surface composite resin restoration at baseline, 6 months, 1 year, 2 years, 5 years after insertion with differential pictures showing increasing wear (*clinical case by A. Peschke*)

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Predictability of Clinical Wear by Laboratory Wear Methods
for the Evaluation of Dental Restorative Materials
Ph.D Thesis, University Medical Center Groningen, Center for Dentistry and Oral Hygiene
University of Groningen, Groningen, The Netherlands

Printed by Pronde Printing Services, Neusäss, Germany

ISBN: 978-90-367-4176-7

RIJKSUNIVERSITEIT GRONINGEN

Predictability of Clinical Wear by Laboratory Wear Methods for the Evaluation of Dental Restorative Materials

Proefschrift

ter verkrijging van het doctoraat in de
Medische Wetenschappen
aan de Rijksuniversiteit Groningen
op gezag van de
Rector Magnificus, dr. F. Zwarts,
in het openbaar te verdedigen op
woensdag 3 februari 2010
om 11:00 uur

door

Siegward Dietmar Heintze

geboren op 16 april 1959
te Saulgau, Duitsland

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Prof. dr. F. Abbas

Beoordelingscommissie: Prof. dr. H. Busscher
Prof. dr. J. Ferracane
Prof. dr. D. Watts

Dedicated to
my wife Leticia
my son Claudio
my sister Cornelia.

Paranimfen: Cornelia Heintze
Felix Magri

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This Ph.D Thesis is based on the following publications:

1. Heintze SD. How to qualify and validate wear simulation devices and methods. Dent Mater 2006;22:712-34. *(reproduced with permission of Elsevier)*
2. Heintze SD, Cavalleri A, Zellweger G, Ferracane JL. Influence of the antagonist material on the wear of different composites in two different wear simulators. Dent Mater 2006;22:166-175. *(reproduced with permission of Elsevier)*
3. Heintze SD, Cavalleri A, Forjanic M, Zellweger G, Rousson V. A comparison of three different methods for the quantification of the in vitro wear of dental materials. Dent Mater 2006;22:1051-1062. *(reproduced with permission of Elsevier)*
4. Heintze SD, Zellweger G, Zappini G. The relationship between physical parameters and wear rates of dental composites. Wear 2007;263:1138-1146. *(reproduced with permission of Elsevier)*
5. Heintze SD, Zappini G, Rousson V. Wear of ten dental restorative materials in five wear simulators-Results of a round robin test. Dent Mater 2005;21:304-317. *(reproduced with permission of Elsevier)*
6. Heintze SD, Faouzi M, Rousson V, Christensen R, Özcan M. Correlation of wear *in vivo* and six laboratory wear methods. Dent Mater 2009, submitted.